

# Additional file 1

BEFORE BIRTH

## WHO Safe Childbirth Checklist



1 On Admission	
<p><b>Does mother need referral?</b></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes, organized</p>	<p>Check your facility's criteria</p>
<p><b>Partograph started?</b></p> <p><input type="checkbox"/> No, will start when <math>\geq 4</math>cm <input type="checkbox"/> Yes</p>	<p>Start plotting when cervix <math>\geq 4</math> cm, then cervix should dilate <math>\geq 1</math> cm/hr</p> <ul style="list-style-type: none"> <li>• Every 30 min: plot HR, contractions, fetal HR</li> <li>• Every 2 hrs: plot temperature</li> <li>• Every 4 hrs: plot BP</li> </ul>
<p><b>Does mother need to start:</b></p> <p><i>Antibiotics?</i></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes, given</p> <p><i>Magnesium sulfate and antihypertensive treatment?</i></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes, magnesium sulfate given <input type="checkbox"/> Yes, antihypertensive medication given</p>	<p>Ask for allergies before administration of any medication</p> <p>Give antibiotics to mother if any of:</p> <ul style="list-style-type: none"> <li>• Mother's temperature <math>\geq 38^{\circ}\text{C}</math></li> <li>• History of foul-smelling vaginal discharge</li> <li>• Rupture of membranes <math>&gt; 18</math> hrs</li> </ul> <p>Give magnesium sulfate to mother if any of:</p> <ul style="list-style-type: none"> <li>• Diastolic BP <math>\geq 110</math> mmHg and 3+ proteinuria</li> <li>• Diastolic BP <math>\geq 90</math> mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain</li> </ul> <p>Give antihypertensive medication to mother if systolic BP <math>&gt; 160</math> mmHg</p> <ul style="list-style-type: none"> <li>• Goal: keep BP <math>&lt; 150/100</math> mmHg</li> </ul>
<p><input type="checkbox"/> <b>Confirm supplies are available to clean hands and wear gloves for each vaginal exam.</b></p>	
<p><input type="checkbox"/> <b>Encourage birth companion to be present at birth.</b></p>	
<p><input type="checkbox"/> <b>Confirm that mother or companion will call for help during labour if needed.</b></p>	<p>Call for help if any of:</p> <ul style="list-style-type: none"> <li>• Bleeding</li> <li>• Severe abdominal pain</li> <li>• Severe headache or visual disturbance</li> <li>• Unable to urinate</li> <li>• Urge to push</li> </ul>

This checklist is not intended to be comprehensive and should not replace the case notes or partograph. Additions and modifications to fit local practice are encouraged. For more information on recommended use of the checklist, please refer to the "WHO Safe Childbirth Checklist Implementation Guide" at: [www.who.int/patientsafety](http://www.who.int/patientsafety).

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## Just Before Pushing (Or Before Caesarean)

**Does mother need to start:***Antibiotics?*

- No  
 Yes, given

*Magnesium sulfate and antihypertensive treatment?*

- No  
 Yes, magnesium sulfate given  
 Yes, antihypertensive medication given

Ask for allergies before administration of any medication

Give antibiotics to mother if any of:

- Mother's temperature  $\geq 38^{\circ}\text{C}$
- History of foul-smelling vaginal discharge
- Rupture of membranes  $>18$  hrs
- Caesarean section

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $>160$  mmHg

- Goal: keep BP  $<150/100$  mmHg

**Confirm essential supplies are at bedside and prepare for delivery:***For mother*

- Gloves  
 Alcohol-based handrub or soap and clean water  
 Oxytocin 10 units in syringe

*For baby*

- Clean towel  
 Tie or cord clamp  
 Sterile blade to cut cord  
 Suction device  
 Bag-and-mask

Prepare to care for mother immediately after birth:

Confirm single baby only (not multiple birth)

1. Give oxytocin within 1 minute after birth
2. Deliver placenta 1-3 minutes after birth
3. Massage uterus after placenta is delivered
4. Confirm uterus is contracted

Prepare to care for baby immediately after birth:

1. Dry baby, keep warm
2. If not breathing, stimulate and clear airway
3. If still not breathing:
  - clamp and cut cord
  - clean airway if necessary
  - ventilate with bag-and-mask
  - shout for help

- Assistant identified and ready to help at birth if needed.

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## Soon After Birth (Within 1 Hour)

**Is mother bleeding abnormally?**

- No  
 Yes, shout for help

If bleeding abnormally:

- Massage uterus
- Consider more uterotonic
- Start IV fluids and keep mother warm
- Treat cause: uterine atony, retained placenta/fragments, vaginal tear, uterine rupture

**Does mother need to start:**

*Antibiotics?*

- No  
 Yes, given

Ask for allergies before administration of any medication

Give antibiotics to mother if placenta manually removed or if mother's temperature  $\geq 38^{\circ}\text{C}$  and any of:

- Chills
- Foul-smelling vaginal discharge

If the mother has a third or fourth degree of perineal tear give antibiotics to prevent infection

*Magnesium sulfate and antihypertensive treatment?*

- No  
 Yes, magnesium sulfate given  
 Yes, antihypertensive medication given

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $> 160$  mmHg

- Goal: keep BP  $< 150/100$  mmHg

**Does baby need:**

*Referral?*

- No  
 Yes, organized

Check your facility's criteria.

*Antibiotics?*

- No  
 Yes, given

Give baby antibiotics if antibiotics given to mother for treatment of maternal infection during childbirth or if baby has any of:

- Respiratory rate  $> 60/\text{min}$  or  $< 30/\text{min}$
- Chest in-drawing, grunting, or convulsions
- Poor movement on stimulation
- Baby's temperature  $< 35^{\circ}\text{C}$  (and not rising after warming) or baby's temperature  $\geq 38^{\circ}\text{C}$

*Special care and monitoring?*

- No  
 Yes, organized

Arrange special care/monitoring for baby if any:

- More than 1 month early
- Birth weight  $< 2500$  grams
- Needs antibiotics
- Required resuscitation

**Started breastfeeding and skin-to-skin contact (if mother and baby are well).**

**Confirm mother / companion will call for help if danger signs present.**

Responsibility for the interpretation and use of the material in this checklist lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. For more information visit [www.who.int/patientsafety](http://www.who.int/patientsafety)

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## Before Discharge

Confirm stay at facility for 24 hours after delivery.

## Does mother need to start antibiotics?

- No  
 Yes, given and delay discharge

Ask for allergies before administration of any medication

Give antibiotics to mother if any of:

- Mother's temperature  $\geq 38^{\circ}\text{C}$
- Foul-smelling vaginal discharge

## Is mother's blood pressure normal?

- No, treat and delay discharge  
 Yes

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $> 160$  mmHg

- Goal: keep BP  $< 150/100$  mmHg

## Is mother bleeding abnormally?

- No  
 Yes, treat and delay discharge

If pulse  $> 110$  beats per minute and blood pressure  $< 90$  mmHg

- Start IV and keep mother warm
- Treat cause (hypovolemic shock)

## Does baby need to start antibiotics?

- No  
 Yes, give antibiotics, delay discharge, give special care

Give antibiotics to baby if any of:

- Respiratory rate  $> 60$ /min or  $< 30$ /min
- Chest in-drawing, grunting, or convulsions
- Poor movement on stimulation
- Baby's temperature  $< 35^{\circ}\text{C}$  (and not rising after warming) or baby's temperature  $\geq 38^{\circ}\text{C}$
- Stopped breastfeeding well
- Umbilicus redness extending to skin or draining pus

## Is baby feeding well?

- No, establish good breastfeeding practices and delay discharge  
 Yes

Discuss and offer family planning options to mother.

Arrange follow-up and confirm mother / companion will seek help if danger signs appear after discharge.

## Danger Signs

**Mother** has any of:

- Bleeding
- Severe abdominal pain
- Severe headache or visual disturbance
- Breathing difficulty
- Fever or chills
- Difficulty emptying bladder
- Epigastric pain

**Baby** has any of:

- Fast/difficult breathing
- Fever
- Unusually cold
- Stops feeding well
- Less activity than normal
- Whole body becomes yellow